

Remarks:

Reconsideration of the application is respectfully requested.

Claims 12 - 27 are presently pending in the application.

Claim 12 has been amended purely to correct apparent errors found in that claim. Claims 1 - 11 were previously canceled.

As it is believed that the claims were patentable over the cited art in their previously presented form, the claims have not been amended to overcome the references.

In item 1 of the Office Action, claims 12 - 18 and 20 - 27 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious over U. S. Patent No. 6,434,139 to Liu et al ("**LIU**") in view of U. S. Patent No. 7,046,683 to Zhao ("**ZHAO**"). In item 2 of the Office Action, claim 19 was rejected under 35 U.S.C. § 103(a) as allegedly being obvious over **LIU** in view of **ZHAO**, and further in view of U. S. Patent No. 6,396,840 to Rose et al ("**ROSE**").

Applicant respectfully traverses the above rejections.

More particularly, claim 12 recites, among other limitations:

processing the signaling information transferred from the PRA ISDN connection by the packet-oriented exchange as a BRA ISDN connection;

. . .

adapting the signaling information transferred from the packet-oriented exchange to the peripheral adapter in accordance with the ISDN connection type of the PRA ISDN connection, **wherein PRA ISDN the connections are represented by BRA ISDN connections in the packet-oriented exchange.** [emphasis added by Applicant]

Similarly, Applicant's claim 22 recites:

A peripheral adapter for a connection of an ISDN private branch exchange or ISDN terminal to a packet network, comprising a resource for **adapting signaling information transferred from a PRA ISDN connection to a packet-oriented exchange for the purpose of the signaling information being processed by the packet-based exchange as signaling information of BRA ISDN connections.** [emphasis added by Applicant]

As such, Applicant's claims require, among other things, **processing signaling information transferred from a PRA** (Primary Rate Access) **ISDN connection as signaling information of a BRA** (Basic Rate Access) **ISDN connection.**

However, in contrast to Applicant's particularly claimed invention, the **LIU** and **ZHAO** references, cited against claims 1 and 22 in the Office Action, do not teach or suggest, among other limitations of Applicant's claims, **processing signaling information transferred from a PRA ISDN connection as signaling information of a BRA ISDN connection.**

In response to Applicant's arguments put forward in the Response to the previous Office Action, page 5 of the Office Action states, in part:

Applicant argues that the prior art (Liu and Zhao) does not teaches [sic] processing a signaling information transferred from a PRA ISDN connection as signaling information of a BRA ISDN connection (see last paragraph on page 3). Examiner respectively disagrees. Liu teaches a gateway 22 connecting to a central office 12 via a T1/E1 trunk group 20 which a primary rate connection (access, or interface) (column 4, lines 4-22). The gateway 22 also connected [sic] to a gateway 24 via a packet data network 10 in figure 1. **Zhao teaches a gateway 50 for connecting to a central office 24 via a trunk line 54, and connecting to a gateway 52 using bear channel via a packet network 20 in figure 1, and a bear channel connection is a basic rate access connection,** see paragraph 0010 in background disclosure of the Specification. [emphasis added by Applicant]

Applicant respectfully disagrees.

Item 1.1 on page 2 of the Office Action clearly acknowledges that the **LIU** reference does not teach **a BRA connection between gateways the gateways 22, 24 of LIU** ("Liu fails to explicitly teach the connection between gateway 22 and gateway 24 is a Basic Rate Access (BRA) connection"). In fact, as previously discussed by Applicant in the prior Response, the **LIU** reference discloses a method for optimizing mobile wireless communications routed across several interconnected networks. See, for example, the title of **LIU**.

With regard to Fig.1 of **LIU**, **LIU** states that communication between a PSTN and end offices (EOs) typically utilizes trunk groups carrying PCM digital voice traffic on multiplexed

channels **at a primary rate of 1.544 Mbps (T1), 2.048 Mbps (E1) or better.** See, for example, col. 4 of **LIU**, lines 9 - 12.

The PSTN of **LIU** provides the normal call communication path between the wireline subscriber units (4, 6 of Fig.1 of **LIU**), but can be bypassed using a packet data network (10 of Fig. 1 of **LIU**) having gateways (22, 24 of Fig. 1 of **LIU**) residing as hosts thereon. See, for example, col. 4 of **LIU**, lines 13 - 24. Thus, **LIU** does not teach or suggest, among other limitations of Applicant's claims, **utilizing a BRA ISDN connection.** Consequently, the **LIU** reference cannot possibly be said to teach or suggest, among other limitations of Applicant's claims, **any processing of signaling information transferred from a primary rate access (PRA) ISDN connection by the packet-oriented exchange as a BRA ISDN connection.**

The **ZHAO** reference, cited in the Office Action in combination with **LIU**, does not cure the above-discussed deficiencies of the **LIU** reference. More particularly, the **ZHAO** reference discloses a VOIP over access network. See, for example, the title of **ZHAO**. With regard to Fig.1 of **ZHAO**, cited to on page 2 of the Office Action, col. 2 of **ZHAO**, line 61 - col. 3, line 4 states:

Within packet-based network 20, a call agent 60 performs the call processing functions of a circuit switch, but in a different way. Call agent 60

exchanges circuit-switched signaling with the switching points controlling trunks 54, 56, using signal paths 62, **64. Call agent 60 thus performs call processing for calls on trunks 54, 56**, although it does not usually physically terminate those trunks. Call agent 60 also controls gateways 50, 52, using a gateway control protocol, such as Media Gateway Control Protocol (MGCP), as described in Network Working Group RFC 2705. [emphasis added by Applicant]

Thus, **ZHAO** describes a packet-based network (20 of Fig. 1 of **ZHAO**) using a call agent (60 of Fig. 1 of **ZHAO**) to perform call processing functions of a circuit switch by exchanging circuit-switched signaling with the switching points controlling trunks (54, 56 of Fig. 1 of **ZHAO**), via the signal paths (62, 64 of Fig. 1 of **ZHAO**). In **ZHAO**, the call agent 60 performs call processing for calls on trunks 54, 56, but does not usually physically terminate those trunks. Additionally, the call agent 60 of **ZHAO** controls the gateways 50, 52 using a gateway control protocol, such as MGCP. **ZHAO** further discloses that the gateways 50, 52 of Fig. 1 of **ZHAO** are deployed at the edge of the packet-based network 20 and are connected with each other to convey voice or bearer data. See, for example, col. 2 of **ZHAO**, lines 54 - 60 and col. 3 of **ZHAO**, lines 4 - 20.

However, a review of that document shows that **ZHAO** does not teach or suggest, among other limitations of Applicant's claims, processing signaling information transferred from a primary rate access (PRA) ISDN connection by the packet-

oriented exchange as a BRA ISDN connection, as required by Applicant's claims. Consequently, the **LIU** and **ZHAO** references both do **not** teach or suggest, among other limitations of Applicant's claims, **any processing of signaling information transferred from a primary rate access (PRA) ISDN connection by the packet-oriented exchange as a BRA ISDN connection**.

For at least the foregoing reasons, Applicant's claims are believed to be patentable over the combination of **LIU** and **ZHAO**.

Applicant notes that Applicant's independent claims even further distinguish over the combination of the **LIU** and **ZHAO** references. In Applicant's response to the previous Office Action, Applicant promulgated a number of limitations of Applicant's claims that were not shown in either **LIU** or **ZHAO** references. However, the Office Action did not address these further distinguishing limitations of Applicant's claims.

In particular, Applicant's claim 12 further requires, among other limitations:

adapting the transferred signaling information in the peripheral adapter in accordance with the ISDN connection type of the PRA ISDN connection; [emphasis added by Applicant]

However, the **LIU** reference does not teach or suggest, among other limitations of Applicant's claims, **adapting the transferred signaling information in the peripheral adapter in accordance with the ISDN connection type of the PRA ISDN connection**, as also required by Applicant's claim 1.

The **ZHAO** reference additionally does not cure this deficiency of the **LIU** reference.

Item 1.1 of the Office Action further alleges that **ZHAO** discloses "that a gateway comprises an adapter (**trunk board 152**) and a packet network exchange (**route switch 180**) (figure 4; column 2, lines 20-40)". However, **ZHAO** does not teach or suggest, among other things, **ISDN connection type aware adapting of signaling information in the trunk board 152 of ZHAO** (analogized in the Office Action to Applicant's particularly claimed "adapter"). Further, **ZHAO** does not teach or suggest, among other limitations of Applicant's claims, performing a PRA ISDN connection by BRA ISDN connections using the route switch board 180 of **ZHAO** (analogized in the Office Action to Applicant's particularly claimed "packet network exchange"). Consequently, the **ZHAO** reference also does not teach or suggest the limitations of Applicant's claims missing from the **LIU** reference.

Further, Applicant's independent claim 12 requires, among other limitations

adapting the signaling information transferred from the packet-oriented exchange to the peripheral adapter **in accordance with the ISDN connection type of the PRA ISDN connection, wherein PRA ISDN the connections are represented by BRA ISDN connections** in the packet-oriented exchange. [emphasis added by Applicant]

However, among other limitations of Applicant's claims, **LIU** also does not teach or suggest, **adapting the signaling information transferred from the packet-oriented exchange to a peripheral adapter in accordance with the ISDN connection type of the PRA ISDN connection or that the PRA ISDN connections are represented by BRA ISDN connections in the packet-oriented exchange**, as further required by Applicant's claim 1.

Page 2 of the Office Action alleged, in part:

Liu teaches a gateway (adapter/network exchange) 22 for exchanging ISDN signaling information between a Primary Rate Interface (Access) (PRI or PRA) trunk 20 and a packet-oriented exchange such in the packet data network 10 (figure 1; column 4, lines 4-22).

From the foregoing, it can be seen that the trunk group 20 of **LIU** is being analogized in the Office Action to "a primary rate connection (access, or interface)". Applicant respectfully disagrees. In the language of **LIU**, a T1 or E1 trunk group (i.e., like trunk groups 18, 20 of **LIU**) are "carrying PCM digital voice traffic on multiplexed channels at

a primary rate of 1.544 Mbps (T1), 2,048 Mbps (E1), or better."

Thus, **LIU** only refers to the transmission rate in the digital transmission hierarchy of PCM technology. However, **LIU** does not teach or suggest that the trunk group 20 of **LIU** is a PRA ISDN connection. Thus, in contrast to the allegations of the Office Action, it does not follow, therefore, that the trunk group 20 of **LIU** is a PRA ISDN connection and the trunk group 20 of **LIU** cannot be properly characterized as such. Quite simply, **LIU** does not disclose trunk group 20 as being a PRA ISDN connection, which would include in particular a special subscriber signaling method and a special channel structure.

In fact, Fig. 1 of **LIU** teaches away from the trunk group 20 of **LIU** being a PRA ISDN connection, as alleged in the Office Action. More particularly, Fig. 1 of **LIU** shows the subscriber equipment of **LIU** being connected to the end office 12 of **LIU** via subscriber lines 16, whereas trunk groups, such as trunk group 18 and 20, are used on the network side of the end office 12 of **LIU**. With that illustration, **LIU** specifically teaches away from the characterization of **LIU**'s trunk group 20 made in the Office Action. As specifically illustrated in **LIU**, and in accordance with the knowledge of a person skilled in this art, network connections are implemented via trunks or

trunk groups and use appropriate interexchange signaling (e.g. ISUP). They are **not** implemented via subscriber signaling (e.g. DSS1), requiring interfaces like a PRA ISDN connection.

Further, page 5 of the Office Action, alleging that a "bearer channel via a packet network 20" of **ZHAO** is "a basic rate access connection". Applicant respectfully disagrees. This interpretation is not supported by paragraph [0010] of **ZHAO**, cited in the Office Action, or by any other part of **ZHAO**. Rather, according to **ZHAO**, circuit switched calls can enter and leave the packet-based network 20 of **ZHAO**. Additionally, within the packet-based network of **ZHAO**, the call agent 60 of **ZHAO** exchanges circuit-switched signaling with the switching points (i.e. central offices), which are controlling trunks 54, 56, using SS7 signal paths 62, 64. This implies, that the bearer data exchanged between the gateways 50, 52 transport only the payload information, **but no signaling information**, as required by Applicant's claims. Rather, in **ZHAO**, the **signaling information** is transported separately as SS7 signaling. See also, for example, Fig. 1 of **ZHAO**. Taking into consideration these details of **ZHAO**, it is unclear, how the bearer data between gateway 52 and gateway 50 of **ZHAO** could be analogized to the BRA ISDN connection of Applicant's claimed invention. In particular, the gateways 50, 52 of **ZHAO** do not transport any **signaling information**, as required by

Applicant's claims. Rather, in **ZHAO**, signaling is done separately via SS7 and not via typical ISDN subscriber signaling protocols as e.g. DSS1, which are required for ISDN BRA connections.

Further still, the references do not contain any teaching, suggestion or motivation to combine them in the manner suggested in the Office Action. In particular, as neither **ZHAO**, nor **LIU**, teach or suggest processing signaling information transferred from a primary rate access (PRA) ISDN connection by the packet-oriented exchange as a BRA ISDN connection, there would not be any teaching, suggestion or motivation provided by those references to use a bearer channel (BRA) connection of **ZHAO** in combination with a primary rate access trunk of **LIU**, or to do so in the manner claimed by Applicant.

There is absolutely no teaching in either **LIU** or **ZHAO** of providing any type of mapping between a PRA connection and a BRA connection. Thus, any combination of **LIU** and **ZHAO** to process a PRA connection as a BRA connection, to map between the two connections, would not be apparent to a person of ordinary skill from reading those references. The combination of **LIU** and **ZHAO** suggested in the Office Action appears to be motivated solely by the impermissible hindsight reconstruction

of Applicant's claimed invention derived from reading the instant application.

Additionally, nothing in the **ZHAO** or **LIU** references teach, suggest or motivate, among other limitations of Applicant's claims, adapting the PRA connection to be handled at least partially by a packet-oriented exchange. Like **LIU**, **ZHAO** also does not teach, suggest or motivate, among other limitations of Applicant's claims, the further limitations of Applicant's claim 1 of: (a) adapting the transferred signaling information in the peripheral adapter in accordance with the ISDN connection type of the PRA ISDN connection; (b) adapting the signaling information transferred from the packet-oriented exchange to the peripheral adapter in accordance with the ISDN connection type of the PRA ISDN connection; and (c) representing the PRA ISDN connections by BRA ISDN connections in the packet-oriented exchange.

For the foregoing reasons, among others, the claims of the instant application are novel and unobvious over the **LIU** and **ZHAO** references, whether taken alone or in combination. The **ROSE** reference, cited in the Office Action in combination with **LIU** and **ZHAO** against Applicant's dependent claim 19, does not cure the above-discussed deficiencies of the **LIU** and **ZHAO** references. For the foregoing reasons, among others,

Applicant's claims are believed to be patentable over the **LIU**, **ZHAO** and **ROSE** references, whether taken alone, or in combination.

It is accordingly believed that none of the references, whether taken alone or in any combination, teach or suggest the features of claims 12 and 22. Claims 12 and 22 are, therefore, believed to be patentable over the art. The dependent claims are believed to be patentable as well because they all are ultimately dependent on claims 12 or 22.

In view of the foregoing, reconsideration and allowance of claims 12 - 27 are solicited.

It is accordingly believed that none of the references, whether taken alone or in any combination, teach or suggest the features of claims 12 and 22. Claims 12 and 22 are, therefore, believed to be patentable over the art. The dependent claims are believed to be patentable as well because they all are ultimately dependent on claims 12 or 22.

In view of the foregoing, reconsideration and allowance of claims 12 - 27 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate receiving a telephone call so that, if possible, patentable language can be worked out. In the alternative, the entry of the amendment is requested, as it is believed to place the application in better condition for appeal, without requiring extension of the field of search.

If an extension of time for this paper is required, petition for extension is herewith made.

Please charge any fees that might be due with respect to Sections 1.16 and 1.17 to the Deposit Account of Lerner Greenberg Stemmer LLP, No. 12-1099.

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Respectfully submitted,

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